

### AMENDMENTS TO THE CLAIMS

1. (Currently amended): A method in a communications system for routing a call, the method comprising:
- specifying a call routing schedule that is based on a current time of day;
  - specifying, by a subscriber, a list of functions, each function being associated with a different activity of ~~[[a]]~~ said subscriber;
  - receiving a call;
  - identifying call routing information for the call;
  - routing calls according to a current time of day utilizing said call routing schedule unless function-based routing is active and a function from said list has been selected;
  - determining, utilizing said call routing information, whether said subscriber has activated function-based routing:
    - determining, utilizing said call routing information, whether said function from said list has been selected;
    - in response to determining that said subscriber has activated function-based routing and said function from said list of functions has been selected, overriding said call routing schedule ~~when a function has been selected~~, said selected function being used for routing calls ~~when said function is selected~~ regardless of said subscriber's current location;
    - ~~responsive to identifying call routing information, determining whether a function has been selected for routing the call;~~
    - ~~responsive to a determination that a function has been selected for routing the call,~~ routing the call using a sequence of destinations associated with the function instead of routing the call using the call routing schedule;
    - monitoring results from routing of the call; and
    - automatically modifying the call routing information based on the results to form modified call routing information, wherein subsequent calls are routed using the modified call routing information.

2. (Previously Presented): The method of claim 1 further comprising:  
responsive to identifying call routing information, determining whether said call routing schedule based on time has been selected for routing the call; and  
responsive to a determination that said call routing schedule based on time is to be used, routing the call using said call routing schedule based on time.
3. (Previously Presented): The method of claim 1, further comprising:  
responsive to a determination that a function has been selected for routing the call, determining whether a time period for the function has expired;  
responsive to a determination that a time period for the function has expired, routing the call; and  
routing the call using said call routing schedule based on time instead of using the sequence of destinations associated with the function.
4. (Canceled)
5. (Previously Presented): The method of claim 1, wherein the call is routed to a subscriber associated with the function.
6. (Original): The method of claim 2 further comprising:  
monitoring results from routing of the call to the subscriber; and  
automatically modifying the call routing information based on the results to form modified call routing information, wherein subsequent calls are routed using the modified call routing information.
7. (Currently amended): A method in a communications system for call routing a call, the method comprising:  
specifying a call routing schedule that is based on a current time of day;  
specifying, by a subscriber, a list of functions, each function being associated with a different activity of said [[a]] subscriber;

routing calls according to a current time of day utilizing said call routing schedule unless function-based routing is active and a function from said list has been selected;

determining, utilizing said call routing information, whether said subscriber has activated function-based routing;

determining, utilizing said call routing information, whether said function from said list has been selected;

in response to determining that said subscriber has activated function-based routing and said function from said list of functions has been selected, overriding said call routing schedule ~~when a function has been selected~~, said selected function being used for routing calls regardless of said subscriber's current location ~~when said function is selected~~;

receiving a call to [[a]] said subscriber;

routing the call to the subscriber using a sequence of destinations associated with the subscriber; and

responsive to a success of routing the call to the subscriber to a destination within the sequence of destinations, automatically modifying the sequence of destinations used to call the subscriber, wherein the sequence of destinations is modified to favor destinations with successful call completions.

8. (Original): The method of claim 7, wherein the sequence of destinations is modified to favor destinations with a selected level of call completions.

9. (Original): The method of claim 7 further comprising:

responsive to detecting initiation of a call by the subscriber from an origin absent from the sequence of destinations, modifying the sequence of destinations to include the origin as a destination within the sequence of destinations.

10. (Original): The method of claim 8, wherein the origin is included as a destination within the sequence of destinations for a period of time.

11. (Original): The method of claim 8, wherein the calling line identifier is recorded to identify the origin from which the subscriber initiated the call.

12. (Original): The method of claim 7, wherein the sequence of destinations are associated with a time slot.

13. (Previously Presented): The method of claim 7, wherein the sequence of destinations are associated with said function.

14-15. (Canceled)

16. (Currently amended): A method in a communications system for call routing a call, the method comprising:

specifying a call routing schedule that is based on a current time of day, said call routing schedule including an ordered set of destinations;

specifying, by a subscriber, a list of functions, each function being associated with a different activity of said [[a]] subscriber;

routing calls according to a current time of day utilizing said call routing schedule unless function-based routing is active and a function from said list has been selected;

determining whether said subscriber has activated function-based routing;

determining whether said function from said list has been selected;

in response to determining that said subscriber has activated function-based routing and said function from said list of functions has been selected, overriding said call routing schedule ~~when a function has been selected~~, said selected function being used for routing calls regardless of said subscriber's current location ~~when said function is selected~~;

receiving a call to a subscriber;

identifying a time of the call;

routing the call to the first destination in said ordered set of destinations for the subscriber based on the time of the call;

responsive to an absence of an answer of the call at the first destination, routing the call to a second destination in the ordered set of destinations;

responsive to an absence of an answer of the call at the second destination, routing the call to a third destination in the ordered set of destinations; and

responsive to an answer of the call at the third destination for a number of times, selecting the third alternate destination as the first alternate destination.

17. (Original): The method of claim 16, wherein the second alternate destination is selected as the first alternate destination for a temporary period of time.

18. (Original): The method of claim 17, wherein the temporary period of time is a day.

19. (Original): The method of claim 16 further comprising:  
responsive to the third destination being answered over a period of time, setting the third destination as the second destination.

20. (Original): The method of claim 16 further comprising:  
responsive to the second destination being answered over a period of time, setting the second destination as the first destination.

21-27. (Canceled)

28. (Currently amended): A switch comprising:  
a call routing schedule that is based on a current time of day;  
a list of functions specified by a subscriber, each function being associated with a different activity of said [[a]] subscriber;  
said call routing schedule for routing calls according to a current time of day unless function-based routing is active and a function from said list has been selected;  
call routing information for determining whether said subscriber has activated function-based routing;

said call routing information for determining whether said function from said list has been selected;

in response to determining that said subscriber has activated function-based routing and said function from said list of functions has been selected, said call routing schedule being overridden when a function has been selected, said selected function being used for routing calls regardless of said subscriber's current location when said function is selected;

an input for receiving a call for a subscriber;

signaling interface for sending a request to a database for said call routing information, wherein call routing information from the database includes a calling sequence for said function associated with the subscriber in response to the subscriber previously selecting the function; and

a switch fabric, wherein the call is routed from the input through the switch fabric to an output to a destination returned by the database using the calling sequence for the function wherein the sequence of destinations is automatically modified in response to a success of routing the call to the subscriber to a destination within the sequence of destinations and wherein the sequence of destinations is modified to favor destinations with successful call completions.

29. (Original): The switch of claim 28, wherein the request sent from the signaling interface to the database is sent to a service control point, which provides an interface to the database.

30. (Currently amended): A service control point comprising:  
a call routing schedule that is based on a current time of day;  
a list of functions specified by a subscriber, each function being associated with a different activity of said ~~[[a]]~~ subscriber;  
said call routing schedule for routing calls according to a current time of day unless function-based routing is active and a function from said list has been selected;  
routing information for determining whether said subscriber has activated function-based routing;

said routing information for determining whether said function from said list has been selected;

in response to determining that said subscriber has activated function-based routing and said function from said list of functions has been selected, said call routing schedule being overridden ~~when a function has been selected~~, said selected function being used for routing calls regardless of said subscriber's current location ~~when said function is selected~~;

an input/output interface, wherein request for routing information is received from a requestor at the input/output interface and routing information returned to the requestor;

a database containing a plurality of calling sequences for subscribers; and

a processing unit connected to the input/output interface and the database, wherein the processing unit has a plurality of modes of operation including:

a first mode of operation in which the processing unit monitors for requests for said routing information;

a second mode of operation, responsive to receiving a request, in which the processing unit identifies routing information for the call;

a third mode of operation, responsive to identifying routing information for the call, in which the processing unit determines whether a function has been selected for routing the call;

a fourth mode of operation, responsive to a determination that a function has been selected for routing the call, in which the processing unit sends routing information for the call using a sequence of destinations associated with the function;

a fifth mode of operation, responsive to an absence of a determination that a function has been selected for routing the call, in which the processing unit sends routing information for the call using a call routing schedule based on time;

a sixth mode of operation for monitoring results from routing of the call; and

a seventh mode of operation for automatically modifying the call routing information based on the results to form modified call routing information, wherein subsequent calls are routed using the modified call routing information.

31. (Currently amended): A communications system for routing a call, the communications system comprising:

a call routing schedule that is based on a current time of day;

a list of functions specified by a subscriber, each function being associated with a different activity of said ~~[[a]]~~ subscriber;

said call routing schedule for routing calls according to a current time of day unless function-based routing is active and a function from said list has been selected; call routing information for determining whether said subscriber has activated function-based routing;

said call routing information for determining whether said function from said list has been selected;

in response to determining that said subscriber has activated function-based routing and said function from said list of functions has been selected, said call routing schedule being overridden ~~when a function has been selected~~, said selected function being used for routing calls regardless of said subscriber's current location ~~when said function is selected~~;

receiving means for receiving a call;

identifying means for identifying said call routing information for the call;

~~determining means, responsive to identifying call routing information, for determining whether a function has been selected for routing the call;~~

~~routing means, responsive to a determination that a function has been selected for routing the call,~~ for routing the call using a sequence of destinations associated with the function instead of routing the call using the call routing schedule;

first monitoring means for monitoring results from routing of the call; and

second modifying means for automatically modifying the call routing information based on the results to form modified call routing information, wherein subsequent calls are routed using the modified call routing information.

32. (Previously Presented): The communications system of claim 31 further comprising:



determining means, responsive to identifying call routing information, for determining whether said call routing schedule based on time has been selected for routing the call; and

routing means, responsive to a determination that said call routing schedule based on time is to be used, for routing the call using said call routing schedule based on time.

33. (Previously Presented): The communications system of claim 31, further comprising:

determining means, responsive to a determination that a function has been selected for routing the call, for determining whether a time period for the function has expired;

first routing means, responsive to a determination that a time period for the function has expired, for routing the call; and

second routing means for routing the call using a call routing schedule based on time instead of using the sequence of destinations associated with the function.

34. (Canceled)

35. (Previously Presented): The communications system of claim 31, wherein the call is routed to a subscriber associated with the function.

36. (Original): The communications system of claim 32 further comprising:

monitoring means for monitoring results from routing of the call to the subscriber; and

modifying means for automatically modifying the call routing information based on the results to form modified call routing information, wherein subsequent calls are routed using the modified call routing information.

37. (Currently amended): A communications system for call routing a call, the communications system comprising:

a call routing schedule that is based on a current time of day;

a list of functions specified by a subscriber, each function being associated with a different activity of ~~[[a]]~~ said subscriber;

said call routing schedule for routing calls according to a current time of day unless function-based routing is active and a function from said list has been selected;

determining means for determining whether said subscriber has activated function-based routing;

determining means for determining whether said function from said list has been selected;

in response to determining that said subscriber has activated function-based routing and said function from said list of functions has been selected, said call routing schedule being overridden ~~when a function has been selected~~, said selected function being used for routing calls regardless of said subscriber's current location ~~when said function is selected~~;

receiving means for receiving a call to a subscriber;

routing means for routing the call to the subscriber using ~~[[call]]~~ a sequence of destinations associated with the subscriber; and

modifying means, responsive to a success of routing the call to the subscriber to a destination within the sequence of destinations, for automatically modifying the sequence of destinations used to call the subscriber, wherein the sequence of destinations is modified to favor destinations with successful call completions.

38. (Original): The communications system of claim 37 further comprising:  
modifying means, responsive to detecting initiation of a call by the subscriber from an origin absent from the sequence of destinations, for modifying the sequence of destinations to include the origin as a destination within the sequence of destinations.

39. (Original): The communications system of claim 38, wherein the origin is included as a destination within the sequence of destinations for a period of time.

40. (Original): The communications system of claim 38, wherein the calling line identifier is recorded to identify the origin from which the subscriber initiated the call.

41. (Original): The communications system of claim 37, wherein the sequence of destinations are associated with a time slot.

42. (Original): The communications system of claim 37, wherein the sequence of destinations are associated with a function.

43. (Currently amended): A communications system for [[call]] routing a call, the communications system comprising:

a call routing schedule that is based on a current time of day;

a list of functions specified by a subscriber, each function being associated with a different activity of said [[a]] subscriber;

said call routing schedule for routing calls according to a current time of day unless function-based routing is active and a function from said list has been selected;

call routing information for determining whether said subscriber has activated function-based routing;

said call routing information for determining whether said function from said list has been selected;

in response to determining that said subscriber has activated function-based routing and said function from said list of functions has been selected, said call routing schedule being overridden when a function has been selected, said selected function being used for routing calls regardless of said subscriber's current location when said function is selected;

receiving means for receiving a call to a subscriber;

routing means for routing the call using call routing information associated with the subscriber;

monitoring means for monitoring results from routing of the call to the subscriber;  
and

modifying means for automatically modifying the call routing information based on the results to form modified call routing information, wherein subsequent calls are routed using the modified call routing information.

44. (Original): The communications system of claim 43, wherein the means of routing the call comprises:

- first routing means for routing the call to a main destination; and
- second routing means, responsive to an absence of an answer at the main destination, for routing the call to an alternate destination.

45. (Currently amended): A communications system for ~~[[call]]~~ routing a call, the communications system comprising:

- a call routing schedule that is based on a current time of day;
- a list of functions specified by a subscriber, each function being associated with a different activity of said [[a]] subscriber;
- said call routing schedule for routing calls according to a current time of day unless function-based routing is active and a function from said list has been selected;
- said call routing schedule being overridden when a determination is made that said subscriber has activated function-based routing and said function from said list a function has been selected, said selected function being used for routing calls regardless of said subscriber's current location when said function is selected;
- receiving means for receiving a call to a subscriber;
- identifying means for identifying a time of the call;
- first routing means for routing the call to the first destination in an ordered set of destinations for the subscriber based on the time of the call;
- second routing means, responsive to an absence of an answer of the call at the first destination, for routing the call to a second destination in the ordered set of destinations;
- responsive to an absence of an answer of the call at the second destination, routing the call to a third destination in the ordered set of destinations;
- responsive to an answer of the call at the third destination for a number of times, selecting the third alternate destination as the first alternate destination.

46. (Original): The communications system of claim 45, wherein the second alternate destination is selected as the first alternate destination for a temporary period of time.

47. (Original): The communications system of claim 46, wherein the temporary period of time is a day.
48. (Original): The communications system of claim 45 further comprising:  
setting means, responsive to the third destination being answered over a period of time, for setting the third destination as the second destination.
49. (Original): The communications system of claim 45 further comprising:  
setting means, responsive to the second destination being answered over a period of time, for setting the second destination as the first destination.
- 50-56. (Canceled)
57. (Currently amended): A computer program product in a computer readable medium for routing a call, the computer program product comprising:  
instructions for specifying a call routing schedule that is based on a current time of day;  
instructions for specifying, by a subscriber, a list of functions, each function being associated with a different activity of [[a]] said subscriber;  
instructions for routing calls according to a current time of day utilizing said call routing schedule unless function-based routing is active and a function from said list has been selected;  
instructions for determining, utilizing said call routing information, whether said subscriber has activated function-based routing;  
instructions for determining, utilizing said call routing information, whether said function from said list has been selected;  
in response to determining that said subscriber has activated function-based routing and said function from said list of functions has been selected, instructions for overriding said call routing schedule ~~when a function has been selected~~, said ~~selected~~ function being used for routing calls regardless of said subscriber's current location ~~when said function is selected;~~

first instructions for receiving a call;  
second instructions for identifying call routing information for the call;  
~~third instructions, responsive to identifying call routing information, for determining whether a function has been selected for routing the call;~~  
~~third~~ fourth ~~instructions, responsive to a determination that a function has been selected for routing the call,~~ for routing the call using a sequence of destinations associated with the function;  
fourth ~~[[fifth]]~~ instructions for monitoring results from routing of the call; and  
~~fifth~~ sixth instructions for automatically modifying the call routing information based on the results to form modified call routing information, wherein subsequent calls are routed using the modified call routing information.

58. (Currently amended): A computer program product in a computer readable medium for call routing a call, the computer program product comprising:

instructions for specifying a call routing schedule that is based on a current time of day;

instructions for specifying, by a subscriber, a list of functions, each function being associated with a different activity of ~~[[a]]~~ said subscriber;

instructions for routing calls according to a current time of day utilizing said call routing schedule unless function-based routing is active and a function from said list has been selected;

instructions for determining, utilizing said call routing information, whether said subscriber has activated function-based routing;

instructions for determining, utilizing said call routing information, whether said function from said list has been selected;

in response to determining that said subscriber has activated function-based routing and said function from said list of functions has been selected, instructions for overriding said call routing schedule ~~when a function has been selected,~~ said selected function being used for routing calls regardless of said subscriber's current location ~~when said function is selected;~~

first instructions for receiving a call to a subscriber;

second instructions for routing the call to the subscriber using [[call]] a sequence of destinations associated with the subscriber; and

third instructions, responsive to a success of routing the call to the subscriber to a destination within the sequence of destinations, for automatically modifying the sequence of destinations used to call the subscriber, wherein the sequence of destinations is modified to favor destinations with successful call completions.

59. (Currently amended): A computer program product in a computer readable medium for [[call]] routing a call, the computer program product comprising:

instructions for specifying a call routing schedule that is based on a current time of day;

instructions for specifying, by a subscriber, a list of functions, each function being associated with a different activity of [[a]] said subscriber;

instructions for routing calls according to a current time of day utilizing said call routing schedule unless function-based routing is active and a function from said list has been selected;

instructions for determining, utilizing said call routing information, whether said subscriber has activated function-based routing;

instructions for determining, utilizing said call routing information, whether said function from said list has been selected;

in response to determining that said subscriber has activated function-based routing and said function from said list of functions has been selected, instructions for overriding said call routing schedule when a function has been selected, said selected function being used for routing calls regardless of said subscriber's current location when said function is selected;

first instructions for receiving a call to a subscriber;

second instructions for identifying a time of the call;

third instructions for routing the call to the first destination in an ordered set of destinations for the subscriber based on the time of the call;

fourth instructions, responsive to an absence of an answer of the call at the first destination, for routing the call to a second destination in the ordered set of destinations;

fifth instructions, responsive to an absence of an answer of the call at the second destination, for routing the call to a third destination in the ordered set of destinations;

sixth instructions, responsive to an answer of the call at the third destination for a number of times, for selecting the third alternate destination as the first alternate destination.

60. (Canceled)